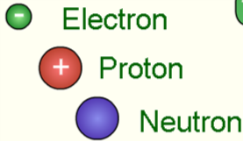
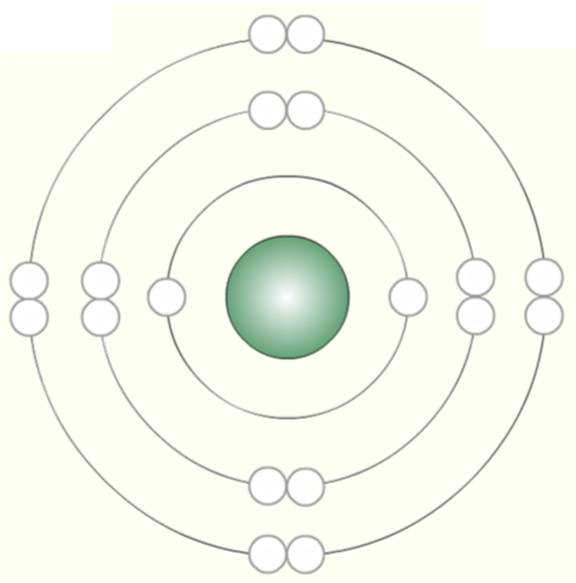
**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Drawing atoms: Ground State and Excited state**

**Part A: Atoms in the ground state.**

In GROUND STATE, all electrons are in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ possible energy state, so are placed as close to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as possible.



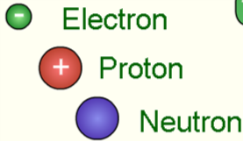
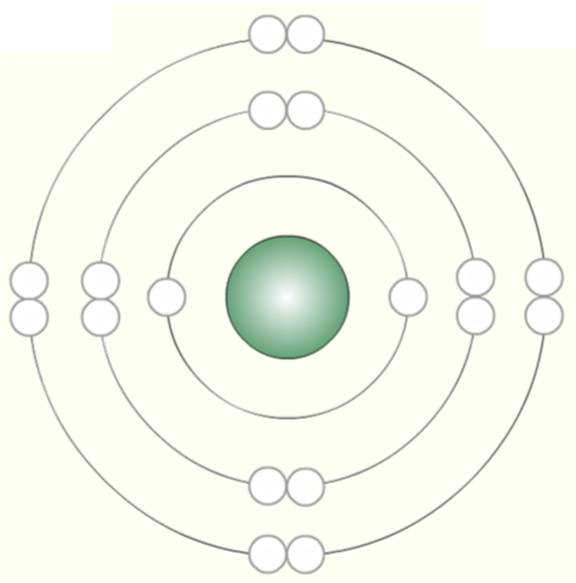
1. A. Draw the protons, neutrons, and electrons for an atom of CHLORINE.

B. How many electrons are in the first shell? \_\_\_\_\_\_\_\_\_\_\_

C. Second? \_\_\_\_\_\_\_\_\_\_\_\_\_

D. Third? \_\_\_\_\_\_\_\_\_\_\_

E. What is the electron configuration for Cl? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



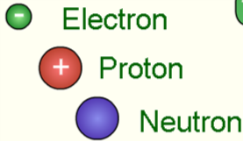
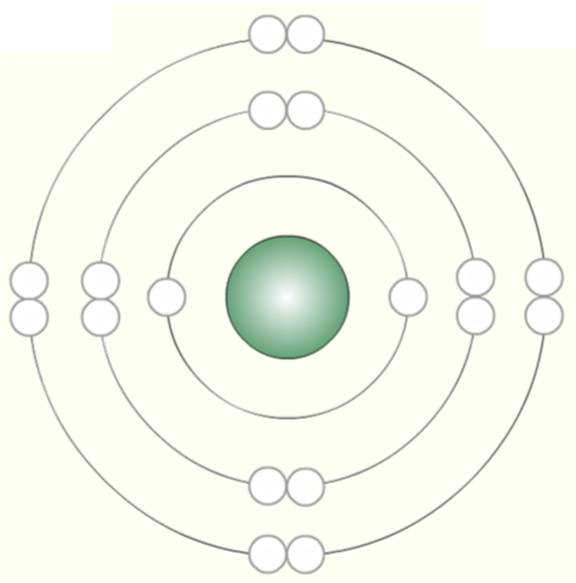
1. A. Draw the protons, neutrons, and electrons for an atom of FLUORINE.

B. How many electrons are in the first shell? \_\_\_\_\_\_\_\_\_\_\_

C. Second? \_\_\_\_\_\_\_\_\_\_\_\_\_

D. Third? \_\_\_\_\_\_\_\_\_\_\_

E. What is the electron configuration for F? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. A. Draw the protons, neutrons, and electrons for an atom of BERYLLIUM.

B. How many electrons are in the first shell? \_\_\_\_\_\_\_\_\_\_\_

C. Second? \_\_\_\_\_\_\_\_\_\_\_\_\_

D. Third? \_\_\_\_\_\_\_\_\_\_\_

E. What is the electron configuration for Be? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part B: Atoms in the Excited State**

Atoms in the excited state have at least \_\_\_\_\_\_\_ electron in a higher energy state (\_\_\_\_\_\_\_\_\_\_\_\_\_ from the nucleus) than the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ state AND the TOTAL NUMBER OF ELECTRONS is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

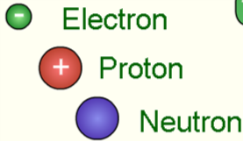
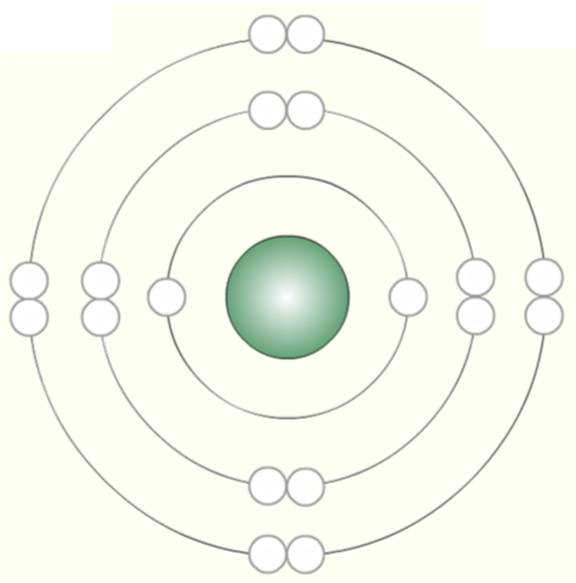
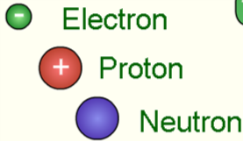
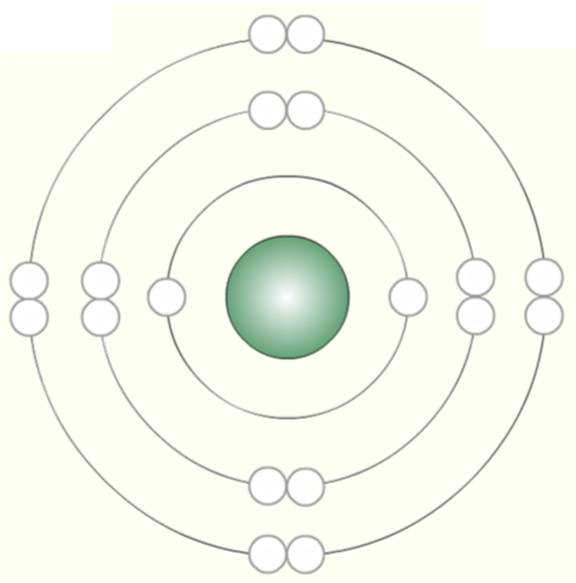
1. A. Draw the protons, neutrons, and electrons for an atom of FLUORINE in the excited state.

B. How many electrons are in the first shell? \_\_\_\_\_\_\_\_\_\_\_

C. Second? \_\_\_\_\_\_\_\_\_\_\_\_\_

D. Third? \_\_\_\_\_\_\_\_\_\_\_

E. What is the electron configuration for F? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



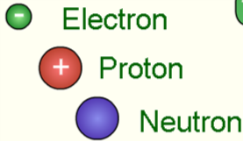
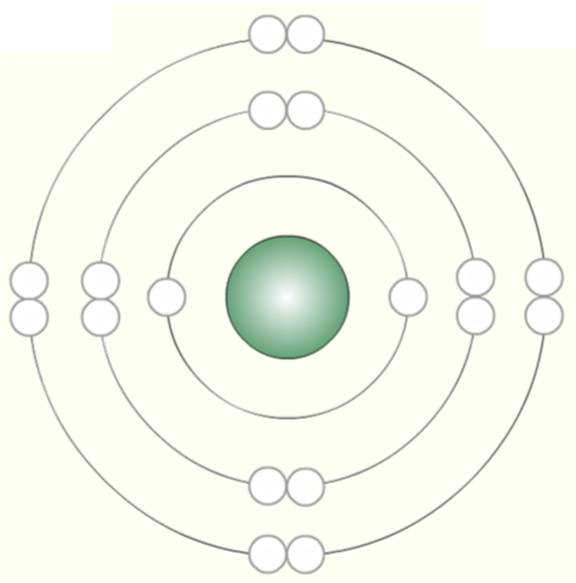
1. A. Draw the protons, neutrons, and electrons for an atom of BERYLLIUM in the excited state.

B. How many electrons are in the first shell? \_\_\_\_\_\_\_\_\_\_\_

C. Second? \_\_\_\_\_\_\_\_\_\_\_\_\_

D. Third? \_\_\_\_\_\_\_\_\_\_\_

E. What is the electron configuration for Be? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. A. Draw the protons, neutrons, and electrons for an atom of NITROGEN in the excited state.

B. How many electrons are in the first shell? \_\_\_\_\_\_\_\_\_\_\_

C. Second? \_\_\_\_\_\_\_\_\_\_\_\_\_

D. Third? \_\_\_\_\_\_\_\_\_\_\_

E. What is the electron configuration for N? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_